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**LEANNE MYNOTT  
MANAGER EXAMINATION SUPPORT  
AND SALES**

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NO. 963 P. 4/25

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ORIGINAL

AUSTRALIA

*Patents Act 1990*

**PROVISIONAL SPECIFICATION**

**Invention Title: "Retrieval Aid"**

**The invention is described in the following statement:**

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**"Retrieval Aid"**

**Field of the Invention**

This Invention relates to a retrieval aid.

**Background Art**

5 The invention is intended to be used with a line having an object at the end whereby the aid can be utilised to retrieve the object in the event that the object becomes engaged at a position at which it cannot be readily accessed. An example of an application of the invention relates to retrieval aid which can be utilised in association with a fishing line in order to retrieve a fish hook or lure that

10 may have become snagged. Another application of the aid relates to a means which can be utilised to engage and retrieve a fishing hook that may have become embedded in the body or skin of an animal such as a fish, bird or the like. Another example of an application of the embodiment relates to a device which could be utilised in association with a kite in order to retrieve the kite from a raised structure

15 such as a tree, roof or the like without the necessity to climb the tree or roof to retrieve the device.

**Disclosure of the Invention**

Accordingly the Invention resides in a retrieval aid intended for use with a flexible line having an object located at the end of the line, the retrieval aid comprising a

20 shaft having a line engagement member mounted at one end, said member being readily engagable with the line whereby when engaged with the line the engagement member surrounds the line and is capable of movement along the line.

According to a preferred feature of the invention the engagement member is of an

25 annular configuration. According to a preferred feature of the invention the engagement member is supported from the one end of the shaft to extend to one side of the shaft. According to a preferred feature of the invention the plane of the

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engagement member is inclined to the central axis of the shaft and extends outwardly from the end of the shaft.

According to a preferred feature of the invention the engagement member is formed as a coil comprising more than one turn. According to a preferred feature  
5 of the invention the adjacent portions of the turns of the coil are spaced from each other. According to a particular embodiment of the invention the coil comprises a complete first turn and a partial second turn. According to a preferred feature of the invention the base of the coil to which the shaft is attached is axially outermost relative to the shaft and the remainder of the coil. According to a preferred feature  
10 of the invention the base of the coil to which the shaft is attached is axially innermost relative to the shaft and the remainder of the coil.

According to a preferred feature of the invention the engagement member is formed with an opening in its circumference and the opening is associated with a closure to provide access into and out of the interior of the member.

15 According to a preferred feature of the invention the shaft is extendable.

According to a preferred feature of the invention the shaft is resiliently flexible.

According to a preferred feature of the invention the shaft supports a retention member which is slidable along the shaft and a cord which is fixed at one end to the retention member, the shaft being formed to prevent disengagement of the  
20 retention member from either end of the shaft.

According to a preferred feature of the invention said engagement member has a dimension less than the object supported by the line.

The invention will be more fully understood in the light of the following description of several specific embodiments.

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### **Brief Description of the Drawings**

**The description is made with reference to the accompanying drawings of which:**

**Figure 1 is a schematic illustration of a retrieval aid according to the first embodiment;**

**5 Figure 2 is a side elevation of the line engagement member according to the first embodiment;**

**Figure 3 is an opposite side elevation to that of Figure 2;**

**Figures 4a and 4b are sectional elevations of couplings according to the first embodiment;**

**10 Figure 5 is a plan view of the line engagement member according to the first embodiment.**

**Figure 6 is a plan view of the line engagement member according to the third embodiment;**

**15 Figure 7 is an inverted plan view of the line engagement member according to the third embodiment;**

**Figure 8 is a side elevation of the line engagement member according to the third embodiment;**

**Figure 9 is an opposite side elevation to that of Figure 8;**

**20 Figure 10 is a view of the third embodiment illustrating the initial engagement of a fish hook with the retrieval device; and**

**Figure 11 is a view of the third embodiment illustrating the engagement of a fish hook with the retrieval device once the fish hook has been freed;**

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Figures 12, 13, 14 and 15 are an isometric view, plan, and opposite side elevations respectively of the fourth embodiment of the invention;

Figures 16, 17, 18 and 19 are an isometric view, plan, and opposite side elevations respectively of the fifth embodiment of the invention;

5 Figure 20 is an illustration of the coil according to the fifth embodiment illustrating the disengagement of a line attached to a freed floating lure; and

Figure 21 is an isometric view of a "standoff coil" according to the sixth embodiment of the invention

#### Detailed Description of Specific Embodiments

10 The first embodiment is directed to a retrieval aid which is intended to be used by fly fishermen in order to facilitate the retrieval of a snagged lure. The embodiment will be described with reference to the Figures 1 to 5 of the accompanying drawings which should be appreciated are illustrative only.

15 The retrieval aid according to the first embodiment comprises a shaft 11, a line engagement member 13 at one end of the shaft 11, a retention member 15 which is slidably supported along the shaft 11 and a cord or lanyard 17 which is connected to the retention member 15.

20 The line engagement member 13 which is shown in Figure 1 in an enlarged form relative to the shaft comprises a coil member having approximately 1½ turns with the turns in a close spaced relationship (as shown) where the base of the coil which is innermost relative to the remainder of the coil, is mounted to one end of the shaft 11. The other end of the coil is divergent outwardly from the remainder of the coil and as a result the free end 16 of the coil is offset from the main body of the coil in that it extends axially and generally tangentially outwardly from the main body as is shown at Figures 3, 4 and 5. This serves to in use prevent the line, once engaged with the coil from being unintentionally engaged between the turns of the coil and consequently disengaging from the coil.

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The shaft 11 is formed of a number of lengths of a suitable flexible material such as a solid thin fibre glass rod or other like fibre reinforced plastics which is flexible throughout its length. The lengths are interconnected by a pair of stainless steel coupling members 21a and 21b which are shown at Figure 4a and 4b respectively.

- 5 The coupling members are each formed with a first socket 25 at one end which receives the end of the shaft and is retained on the rod using a suitable adhesive. To facilitate adhesion of the coupling members to the free ends of the shaft the inner face of the first socket 25 of the coupling members 21 is formed with a shallow thread (not shown). The shallow thread assists the bonding of the
- 10 coupling member to the shaft by the adhesive.

The other end of each coupling member 21a and 21b is formed with a complementary threaded portion where the first coupling member 21a has internally threaded second socket 27 and the second coupling member 21b has an externally screw threaded portion 29 which is threadably engagable with the

- 15 second socket 27 of the one coupling member 21a. Each length of shaft has a first coupling 21a at one end and a second coupling member 21b at the other end. The shaft can comprise one or more length added to it in order to facilitate the extension of the shaft as required by the user.

One end of the shaft supports line engagement member 13 at its other end. In this

- 20 regard the inner end of the coil is formed with an external thread which is engagable with the threaded second socket 27 of the first coupling 21a at the free end of the shaft.

If desired a handle can be mounted to the second coupling member 21b which is at the other end of the shaft.

- 25 The retrieval aid is intended to facilitate the retrieval of a fishing lure in the event that it becomes snagged. In such an event the line engagement member 13 is engaged with the line by introducing the line into the entry 19 which is defined at the junction between the line engagement member 13 and the shaft 11 and then between the turns of the engagement member 13 to cause the line to become
- 30 received within the confines of the coil. Once the engagement member is engaged

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with the line it can be moved along the length of the line whilst the shaft is being held by the user until such time as the coil reaches the lure at the free end of the line. Once the engagement member is engaged with the lure, the shaft can then be manipulated to cause the coil to engage the lure and effect its disengagement 5 from the snag or like obstruction without placing any undue stress on the line itself which could result in a loss of the lure.

The line retention member 15 comprises a resilient part circular element which can be resiliently deformed to be applied over the shaft and which has a diameter less than that of the coupling member handle (if present) at the free end of the shaft in 10 order to prevent its inadvertent disengagement from the shaft. The retention member 15 is slidably received on the shaft 11 and is associated with the lanyard. In use the lanyard can be wrapped around the wrist of the user as shown or can be applied around an adjacent fixed element (such as cleat on a boat) to ensure that the retrieval aid is not lost if it falls from the grasp of the user.

15 The second embodiment of the invention (not shown) is a variation from the first embodiment and comprises a device which can be used to extract a fish hook from the mouth or body of a fish once caught where the device has a shortened shaft compared to the shaft of the first embodiment and the engagement member takes the same form as in the case of the first embodiment. If desired the second 20 embodiment may be capable of being mounted to the end of a resilient shaft of the form of the first embodiment in order that it can be used to retrieve lures in a similar manner to the first embodiment.

The third embodiment is directed to a retrieval aid which is intended to be used by 25 fishermen in order to facilitate the retrieval of a hook from the mouth of a fish. The embodiment will be described with reference to the Figures 6 to 11 of the accompanying drawings which should be appreciated are illustrative only.

The third embodiment is of a similar form to the first embodiment with the exception of the orientation of the coil. In the case of the third embodiment the base of the coil which is attached to the shaft is axially outermost and the turns of the coil are 30 spaced from each other (as shown).

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The configuration of the coil of the third embodiment and its orientation enables a line to be readily engaged with the coil by one action. In addition as illustrated at Figures 10 and 11 once a hook is engaged by the coil and is disengaged from within the fish the application of tension to the line by the user will cause the hook

5 to slide to the axially innermost position on the coil adjacent the end of the shaft with the point of the hook lying adjacent the shaft. As a result the point of the hook is held alongside the shaft and as a result is less likely to become reengaged with the flesh of the fish as the coil and hook are removed from the fish. In addition while the angle of the coil will readily cause the hook to slide to the portion of the

10 coil most adjacent the shaft when disengaged from the fish and with adequate tension being applied to the line in effecting the disengagement of the hook from the fish the coil can be engaged with the hook and with tension being applied to the line the retrieval device does not need to be displaced too far inwardly into the body of the fish during the disengagement step.

15 The fourth embodiment as shown at Figures 12 to 15 is a lure retrieval device and is a variation of the third embodiment except that the free end portion 16 of the coil is located adjacent the shaft rather than being remote as in the case of the first embodiment and the coil has an extent of approximately 1½ turns and the free end portion 16 of the coil extends substantially tangentially from the coil. In addition the

20 free end portion 16 is spaced slightly from the previous turn.

The fourth embodiment provides the advantages over the first embodiment in that:

- it is more easily attached to the line;
- once the coil is engaged with the line there is a reduced likelihood of the line becoming disengaged from the coil during retrieval; and

25 • the configuration of the coil provides that on manipulation of the coil the free end portion 16 and the remainder of the coil is readily accessible to the line and the line is more easily engaged in the slot and within the coil when the retriever is prodded around feeling for the submerged line. Once the line is encountered by any part of the shaft of the retriever, the operator can sense

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the line and with an upward movement of the retriever, the line will slide into the slot and engage with the coil.

The fifth embodiment which is shown at Figure 16 to 20 is a variation of the fourth embodiment with the exception the coil comprises a little more than a single revolution and the free end portion 16 of the coil at the point of overlying the previous turn is directed substantially tangentially to the coil. The design of the coil of the fifth embodiment is intended to enable the line to freely disengage from the coil after a floating lure has been freed. It is intended that once the lure has been freed it will float upwards and in so doing will draw the line through the slot to cause disengagement as illustrated at Figure 20.

The sixth embodiment of the invention relates to a "stand-off coil" 37 which can be used with any of the previous embodiments which have comprised a retriever. The stand-off coil 37 is intended to be located at one or more intermediate positions along the length of the shaft depending upon the length of the shaft and provide support for the line being supported by the coil and for reasons which will be described to enable the line to reinforce the shaft when in use. The stand-off coil is formed from a length of suitable metal rod and is bent to provide a circular ring shaped base 39 which is dimensioned to be received around the externally threaded portion 35 of the second coupling member 21b and thus to be clampingly received between the coupling members 21a and 21b at an intermediate position along the shaft. The free end of the stand off coil is formed as a coil 41 of a similar form to the coils which comprise the engagement means of the previous embodiments to enable the user to readily engage and disengage the line with the stand-off coil. In use the where the retriever is being used in fast flowing water there is a tendency for the shaft to bend under the influence of the water flow and this can create a difficulty for the user in locating a snagged lure. In use the line is held tight while the engagement means is caused to pass down the length of the line. The presence of the stand-off coil serves to provide support between the taut line and the shaft at one or more positions along the shaft to prevent the shaft from bending.

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Throughout the specification, unless the context requires otherwise, the word "comprise" or variations such as "comprises" or "comprising", will be understood to imply the inclusion of a stated integer or group of integers but not the exclusion of any other integer or group of integers.

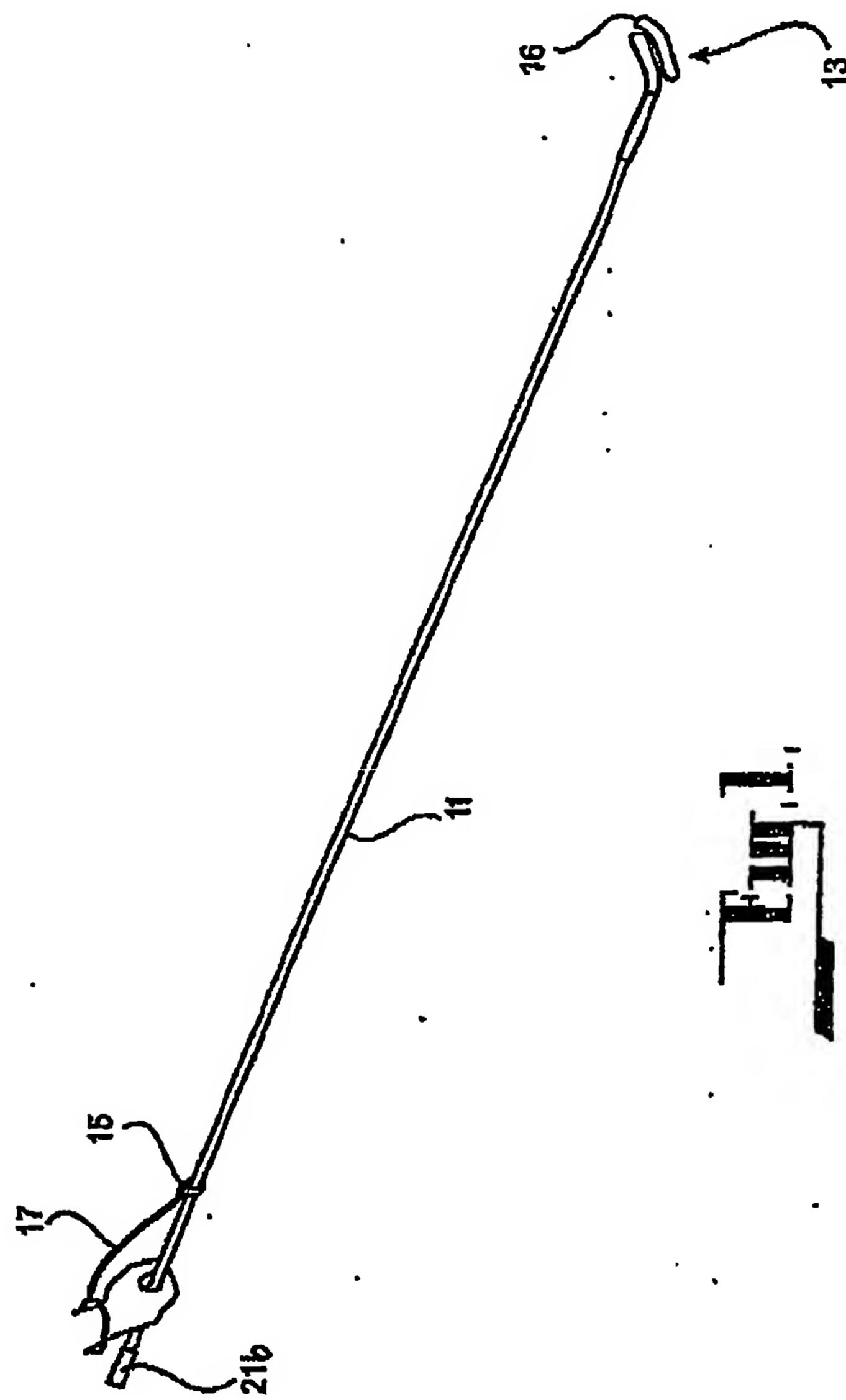
- 5 It should be appreciated that the scope of the present invention need not be limited to the particular scope of the embodiment described above. In particular the invention need not be limited to particular application described above in relation to the embodiments but can be utilised with any flexible elongate member or line to retrieve an object or manipulate a free end of the line. In addition the engagement
- 10 member of the invention and which takes the form of a coil does not need to have the particular configuration as described in relation to each of the embodiments but can take the form of the mirror image of each of the embodiments and can comprise a left handed or a right handed coil.

Dated this twenty second day of June 2004

**JOHN SZYMANSKI**  
Applicant

Wray & Associates  
Perth, Western Australia  
Patent Attorneys for the Applicant

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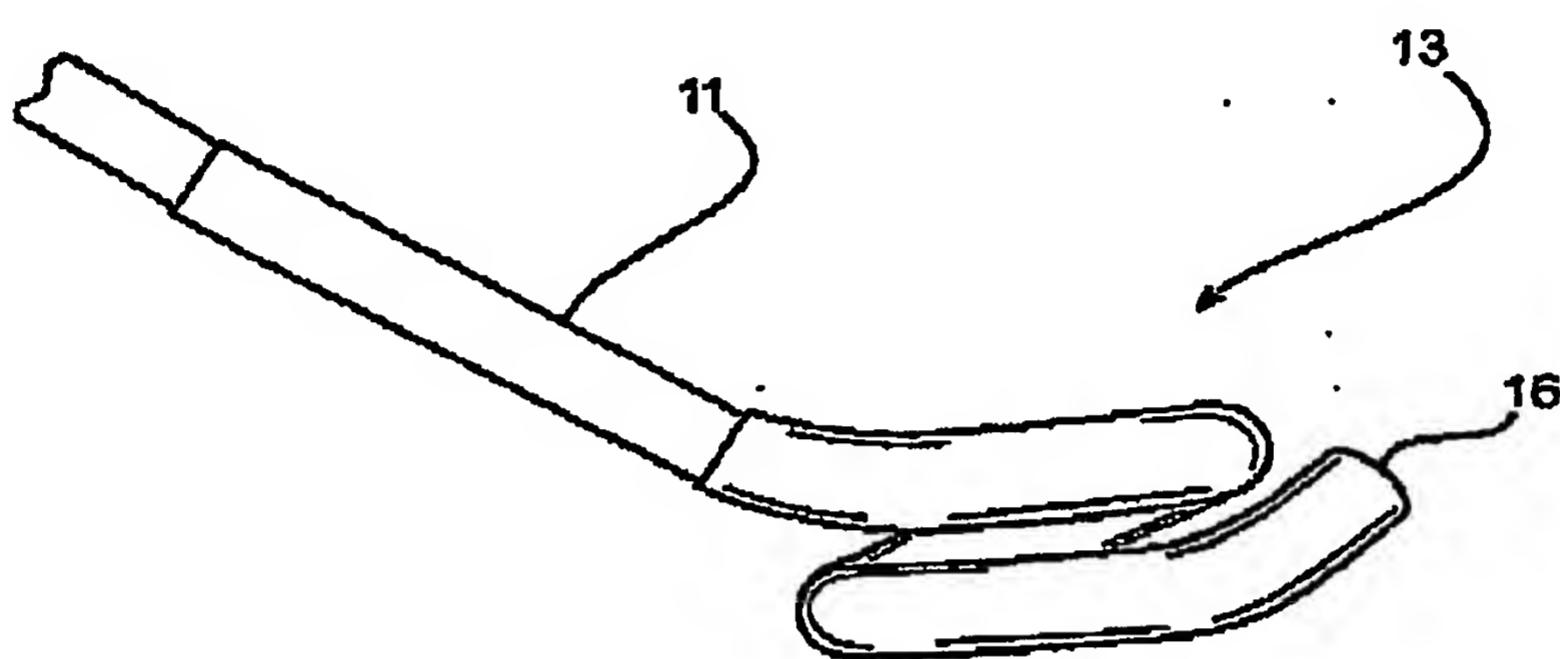


Fig. 2.

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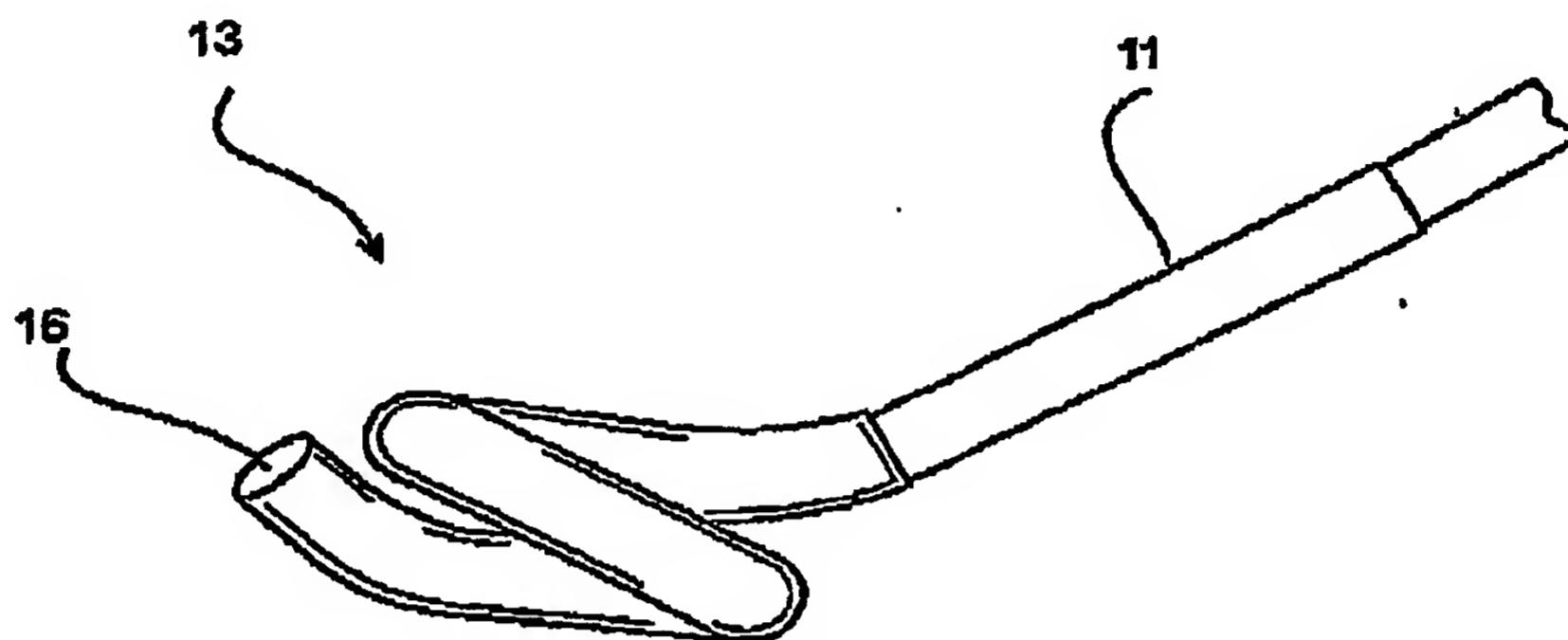
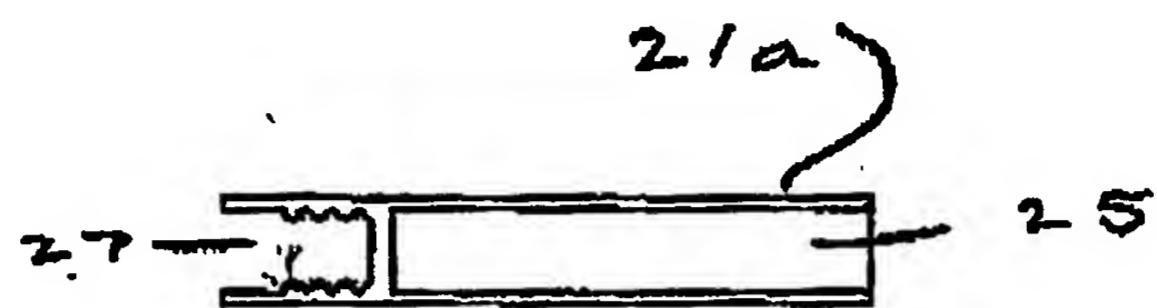


Fig. 3.

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FIG. 4aFIG. 4b

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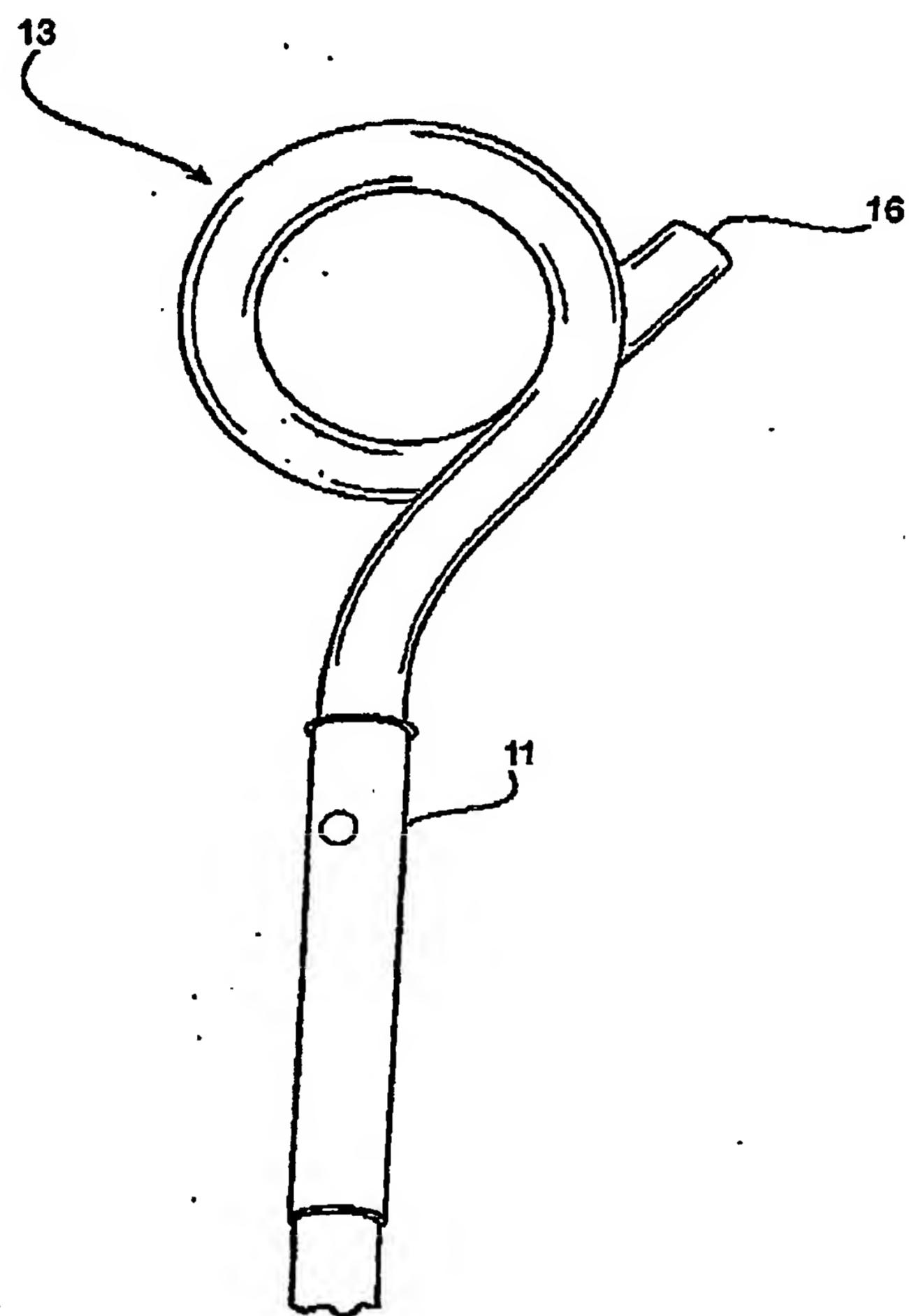
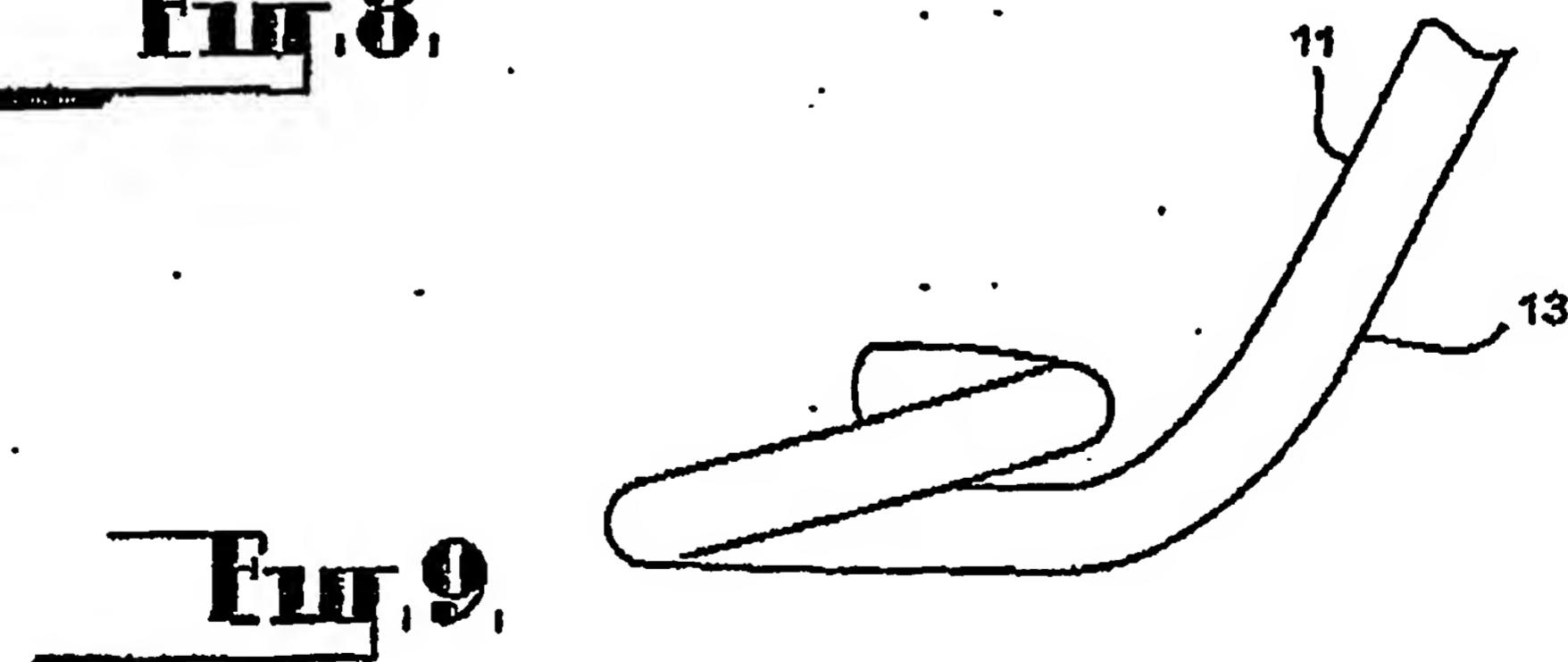
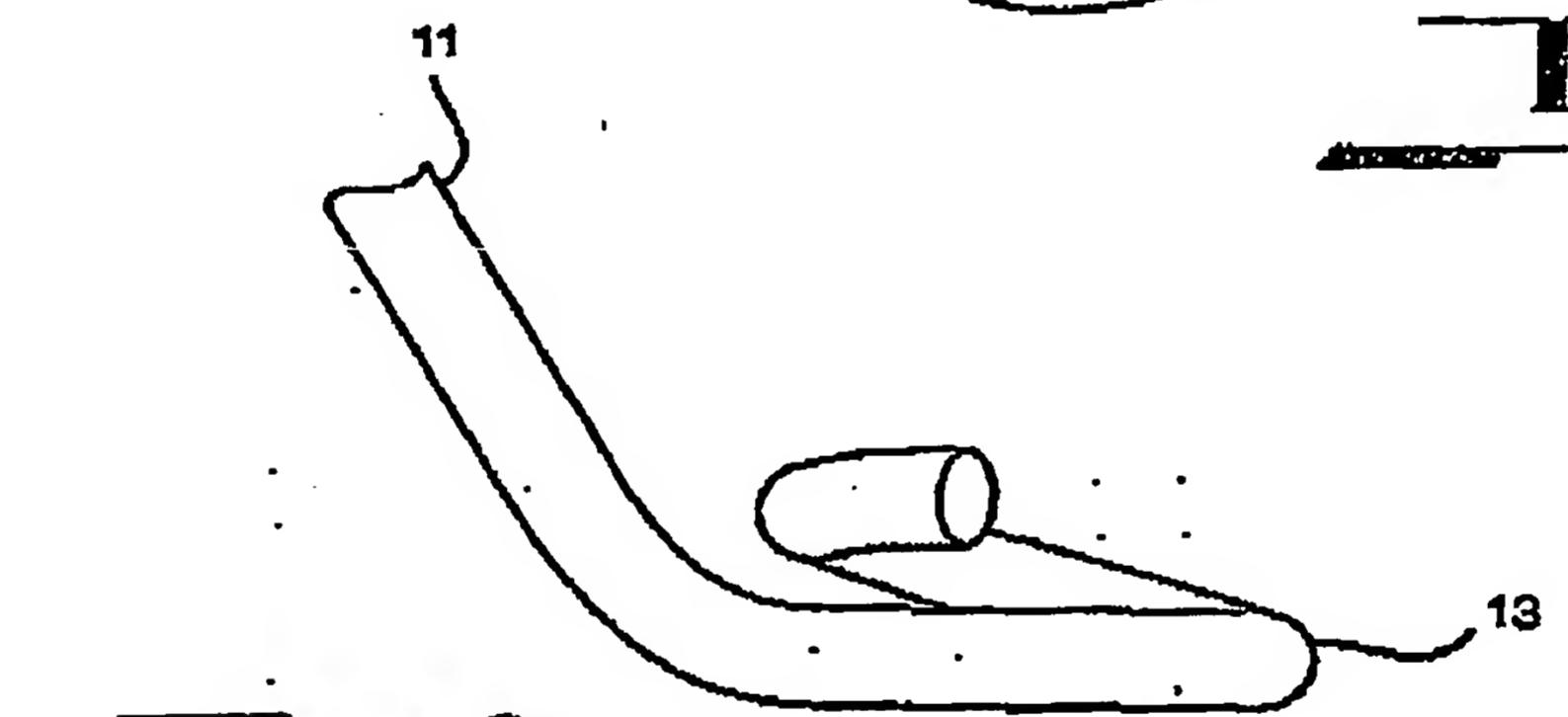
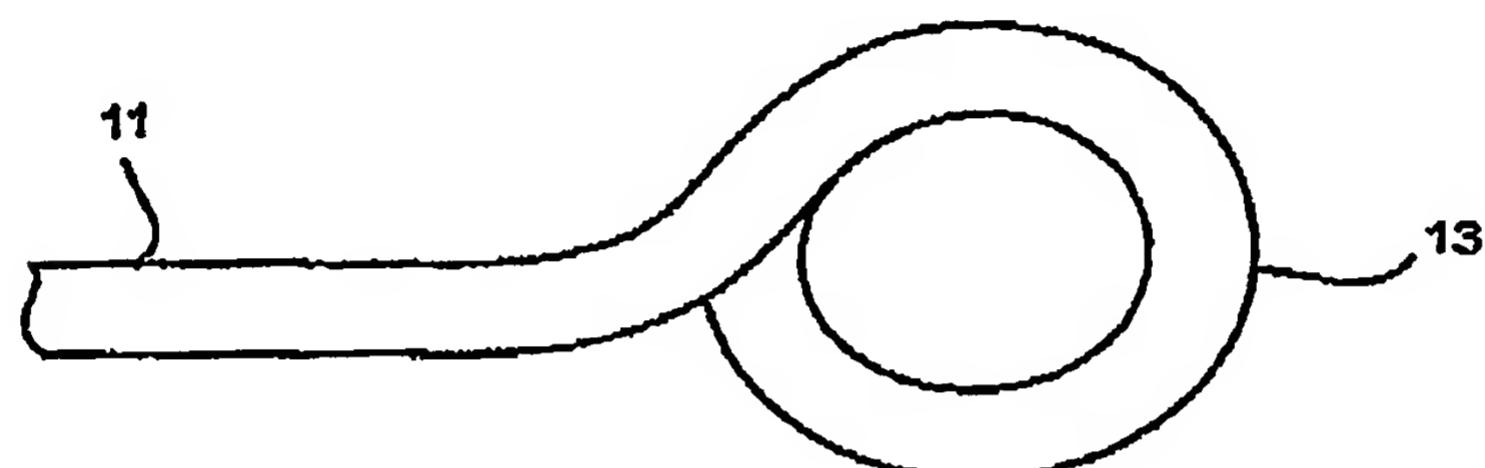
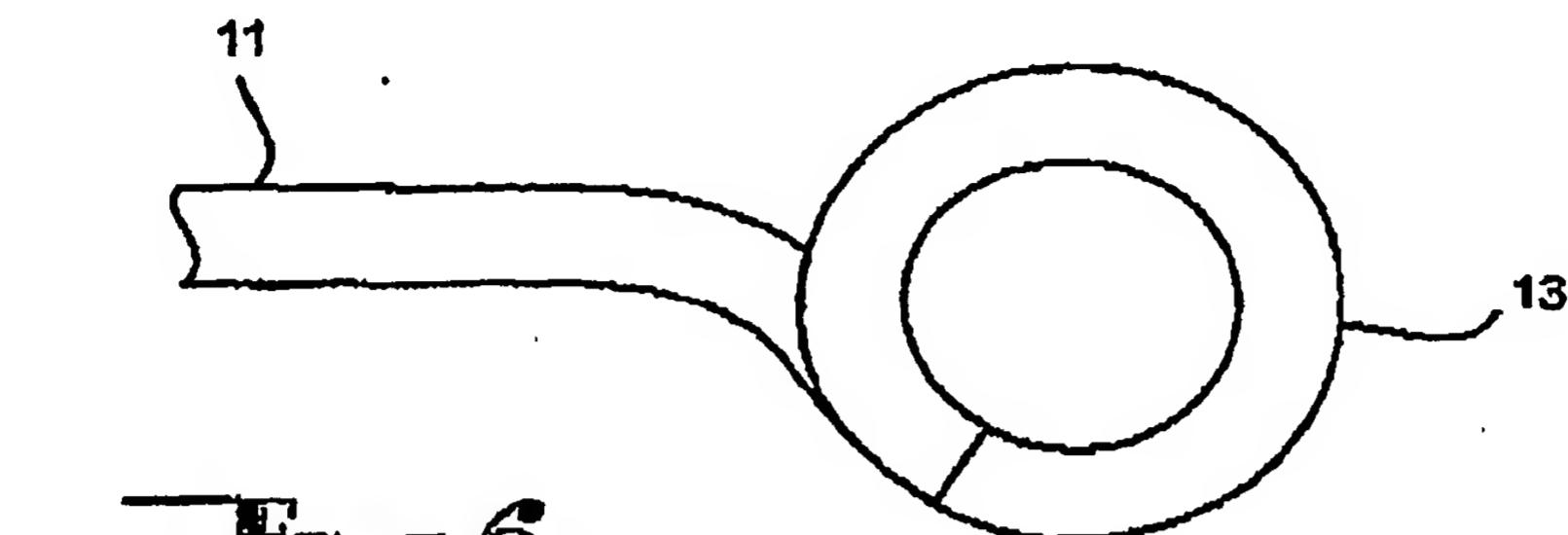


Fig. 5.

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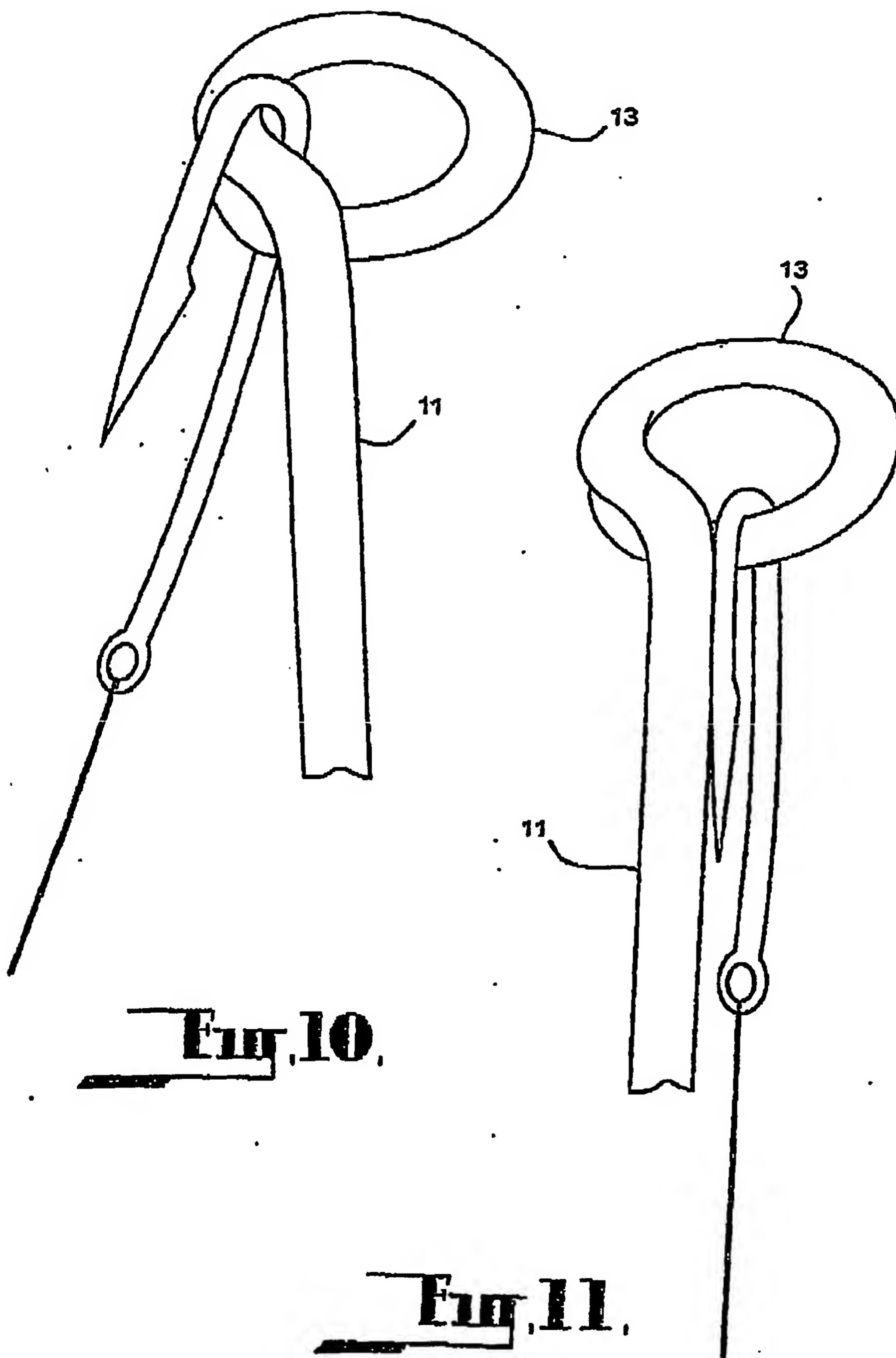


Fig. 10.

Fig. 11.

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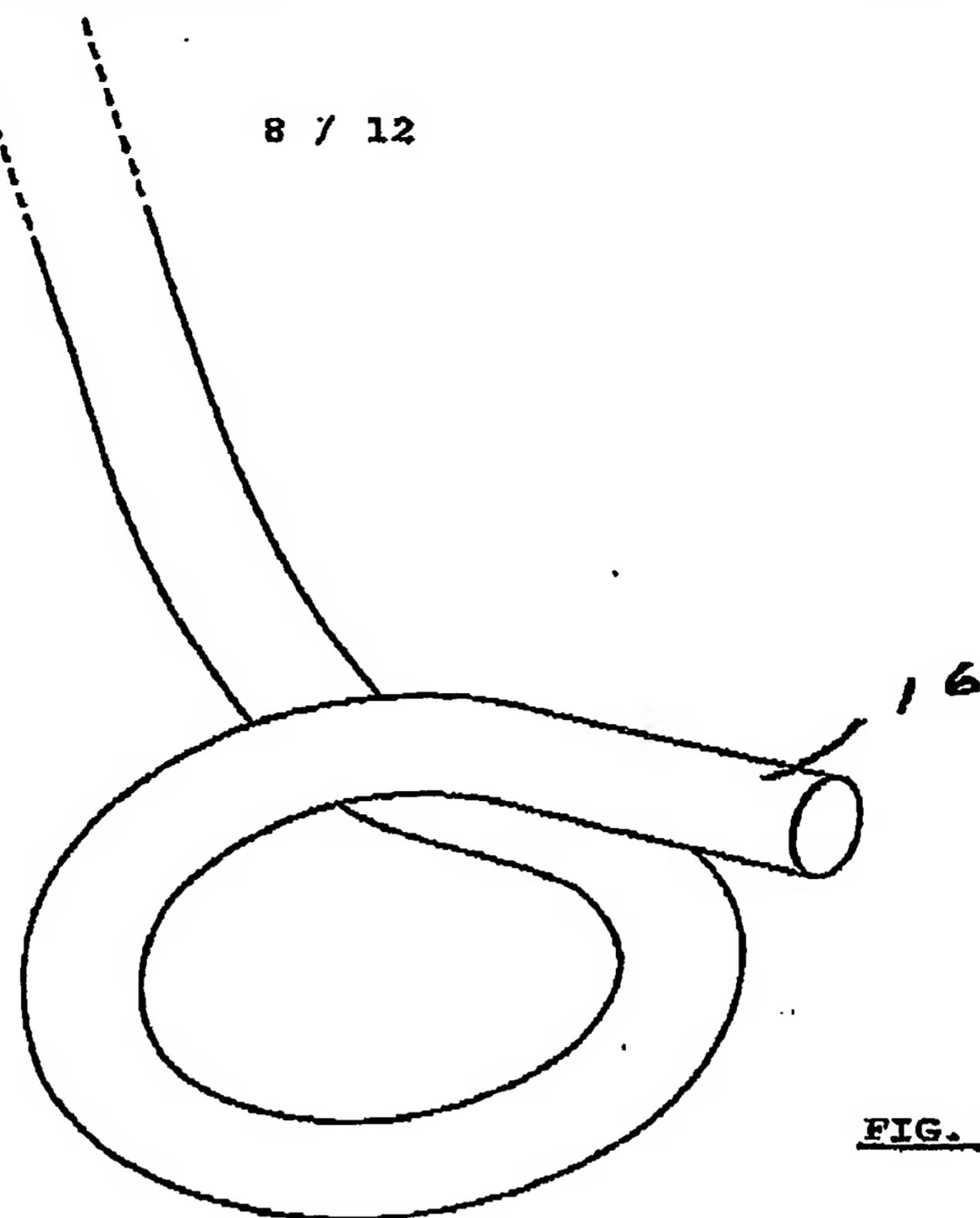


FIG. 12

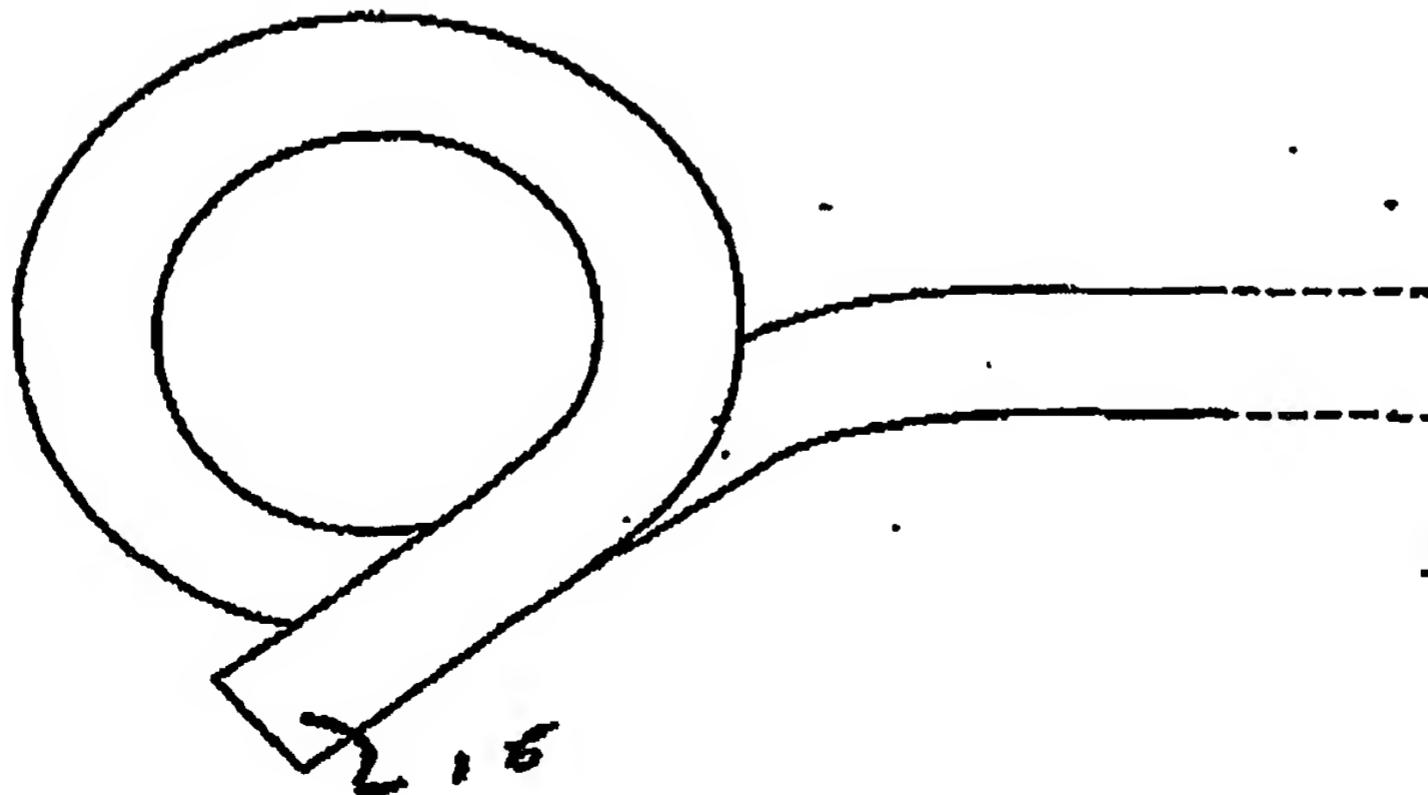


FIG. 13

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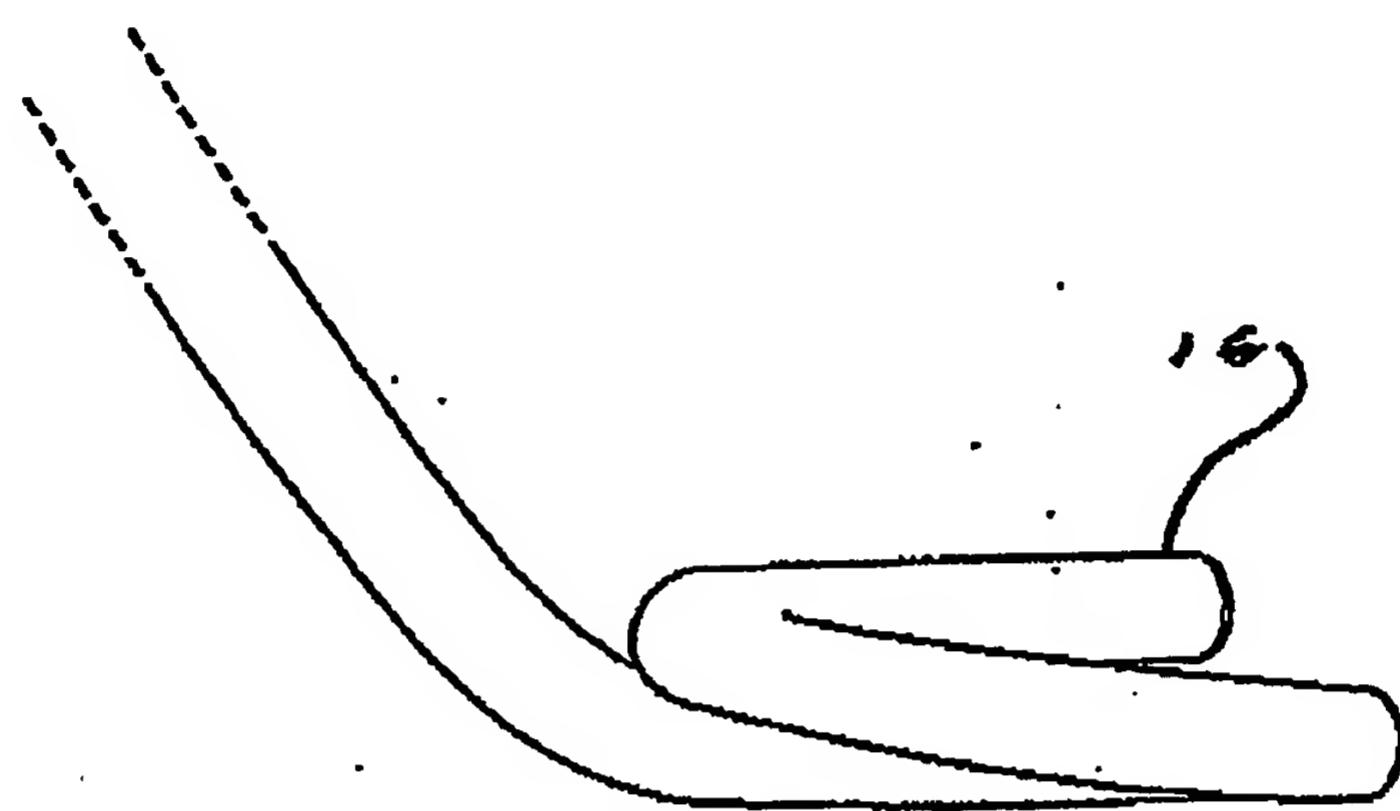


FIG. 14

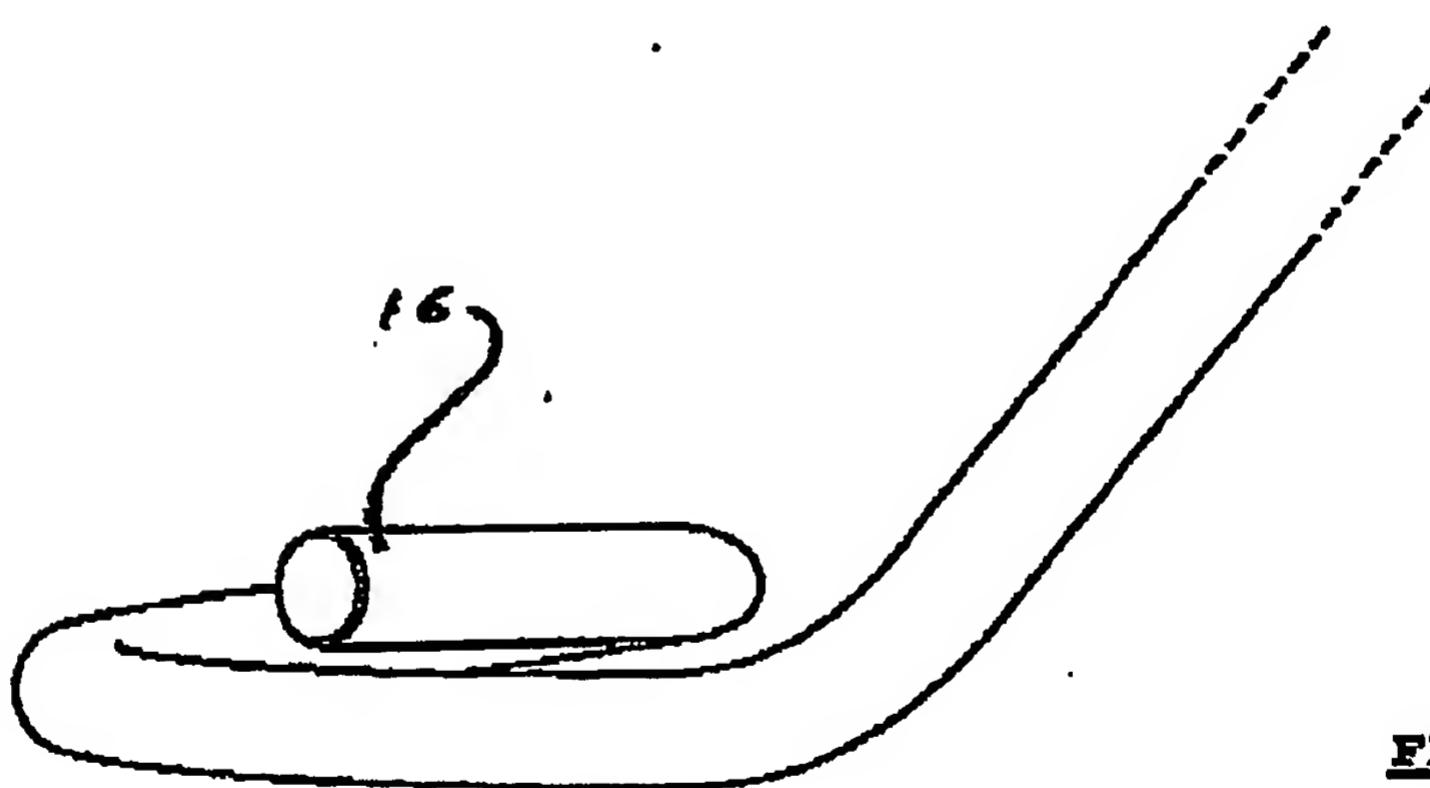
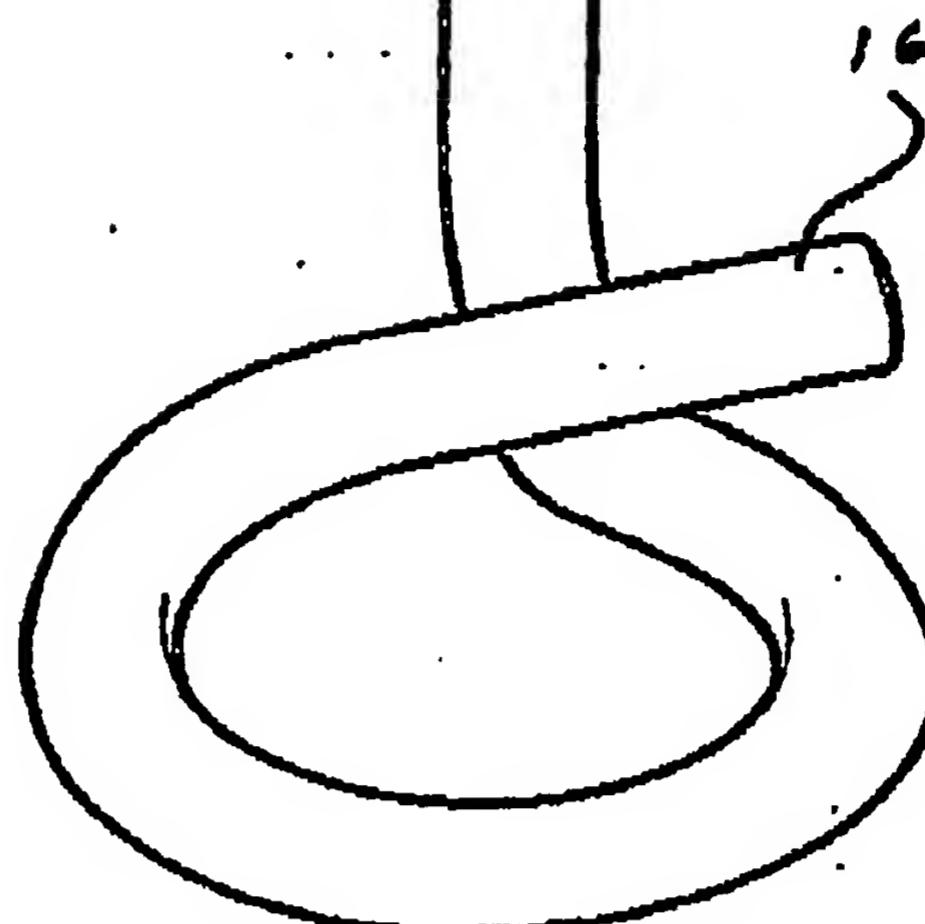
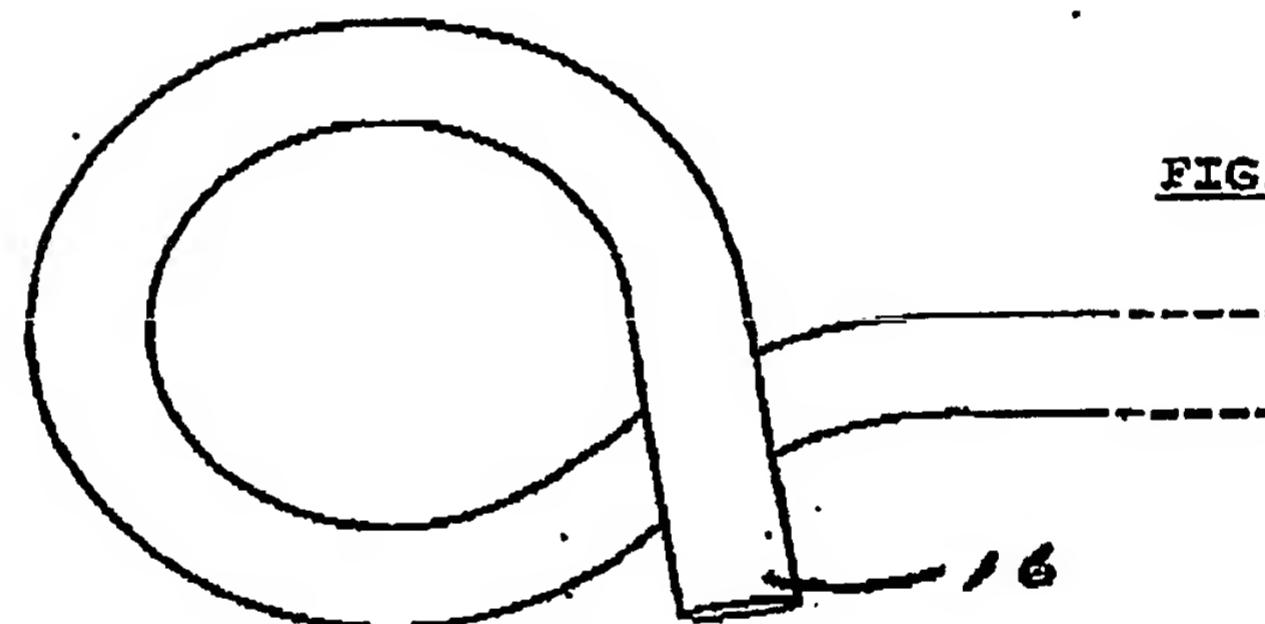
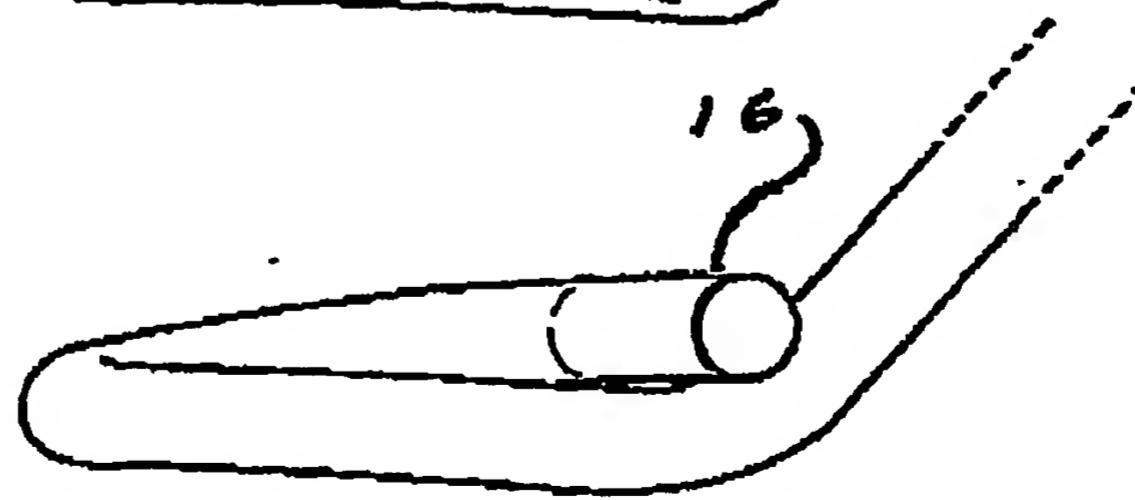


FIG. 15

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FIG. 16FIG. 17FIG. 18FIG. 19

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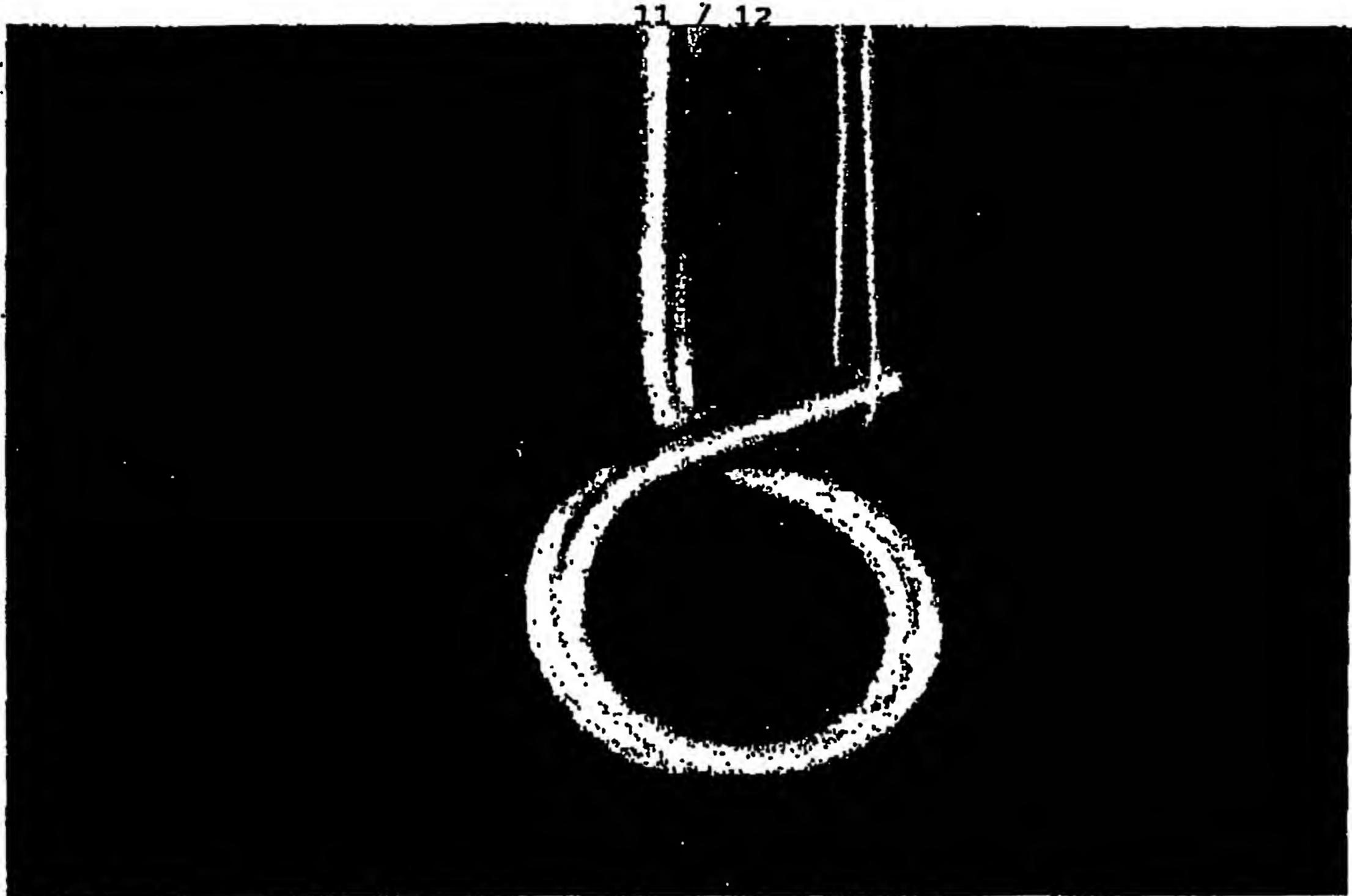


FIG. 20

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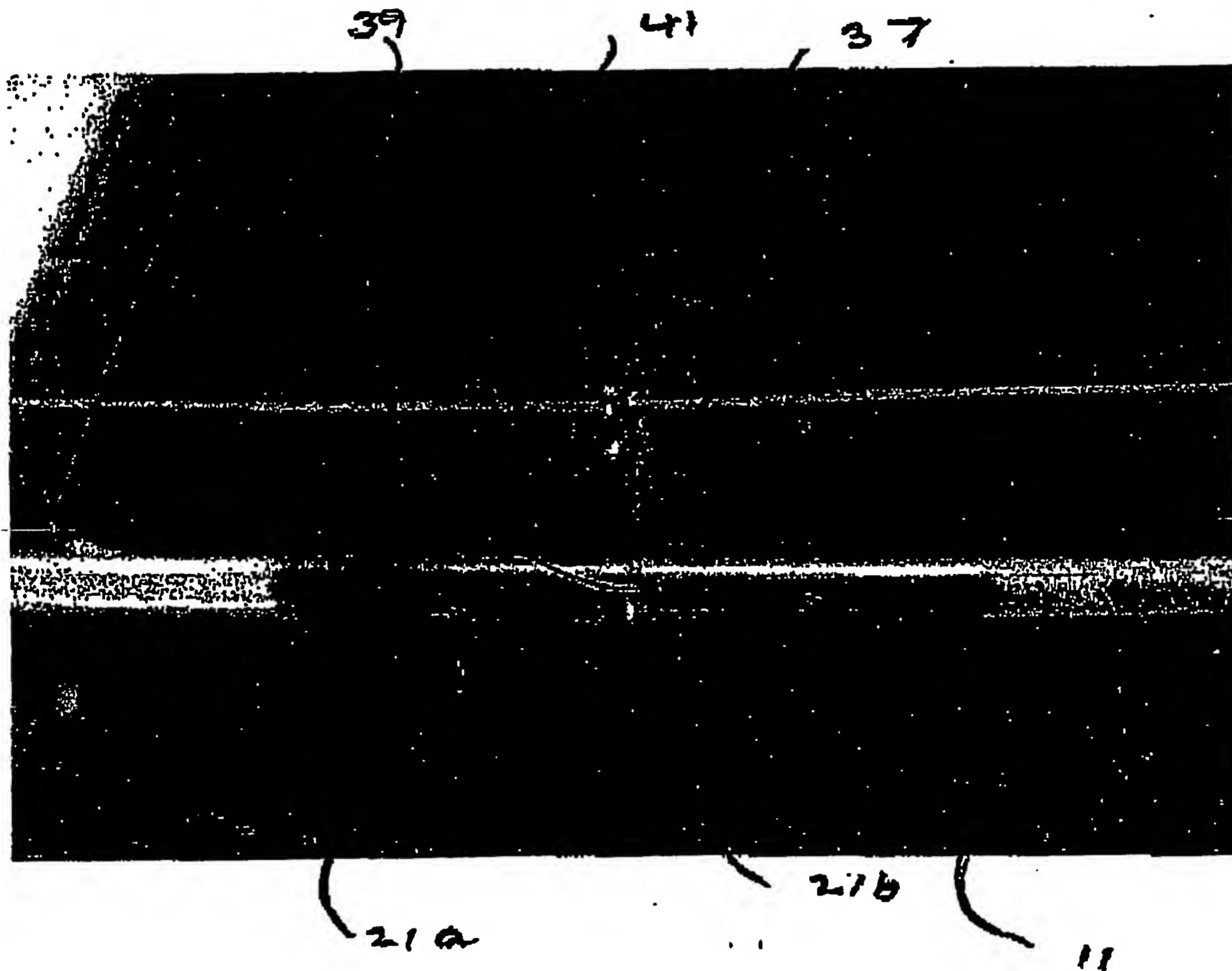


FIG. 21

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